

FIG. 1

F16. 2A

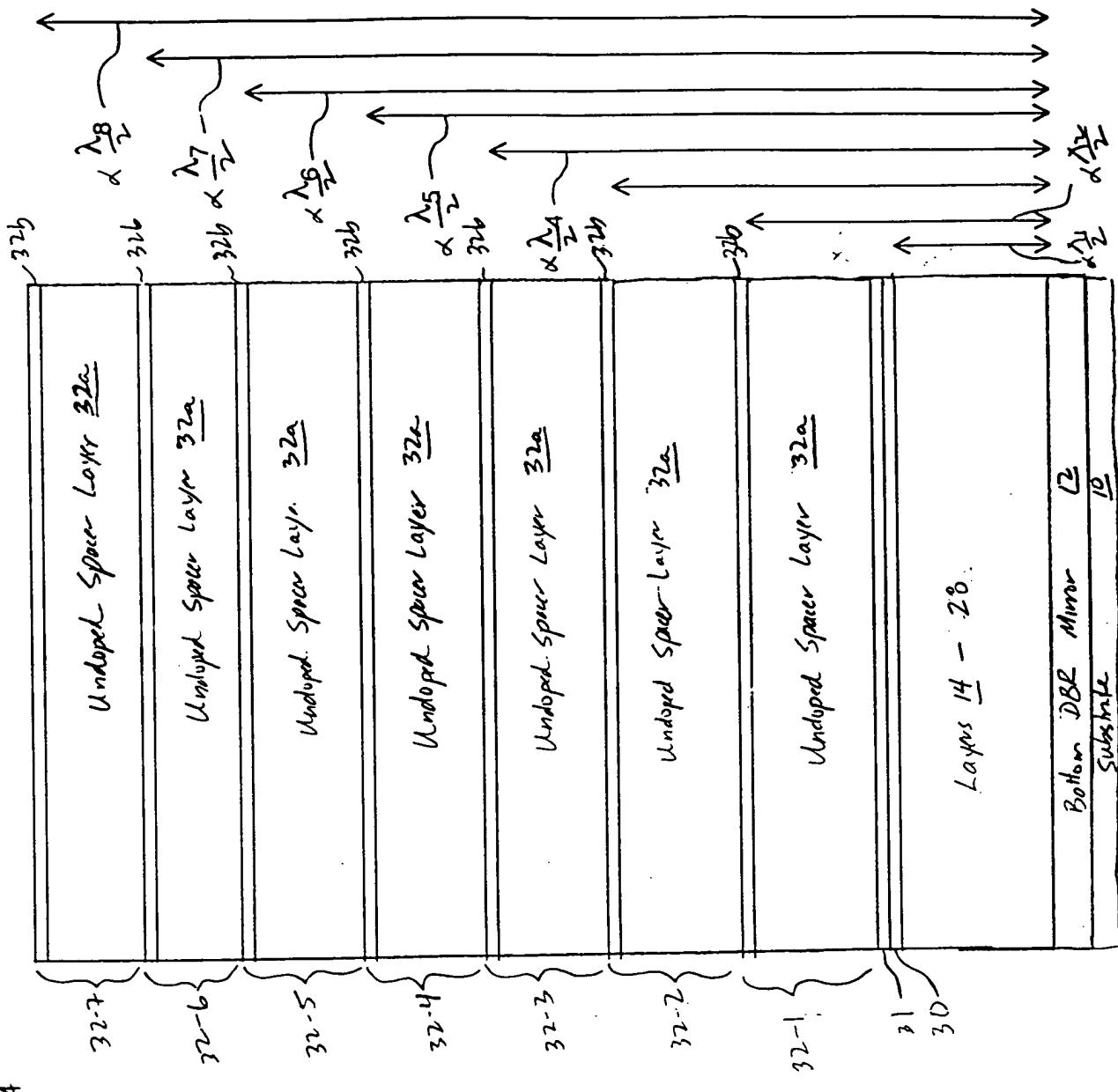


FIG 2B

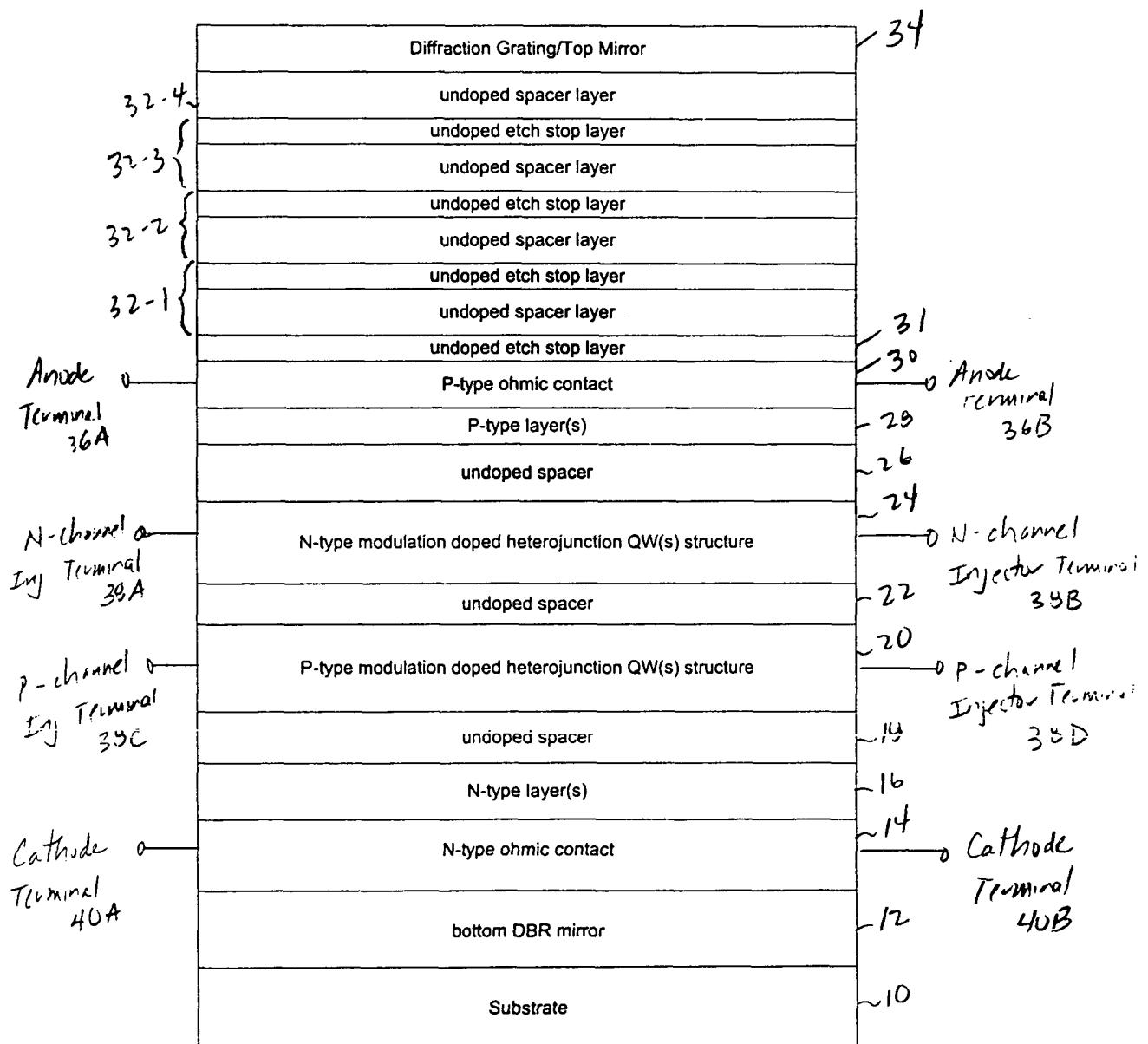
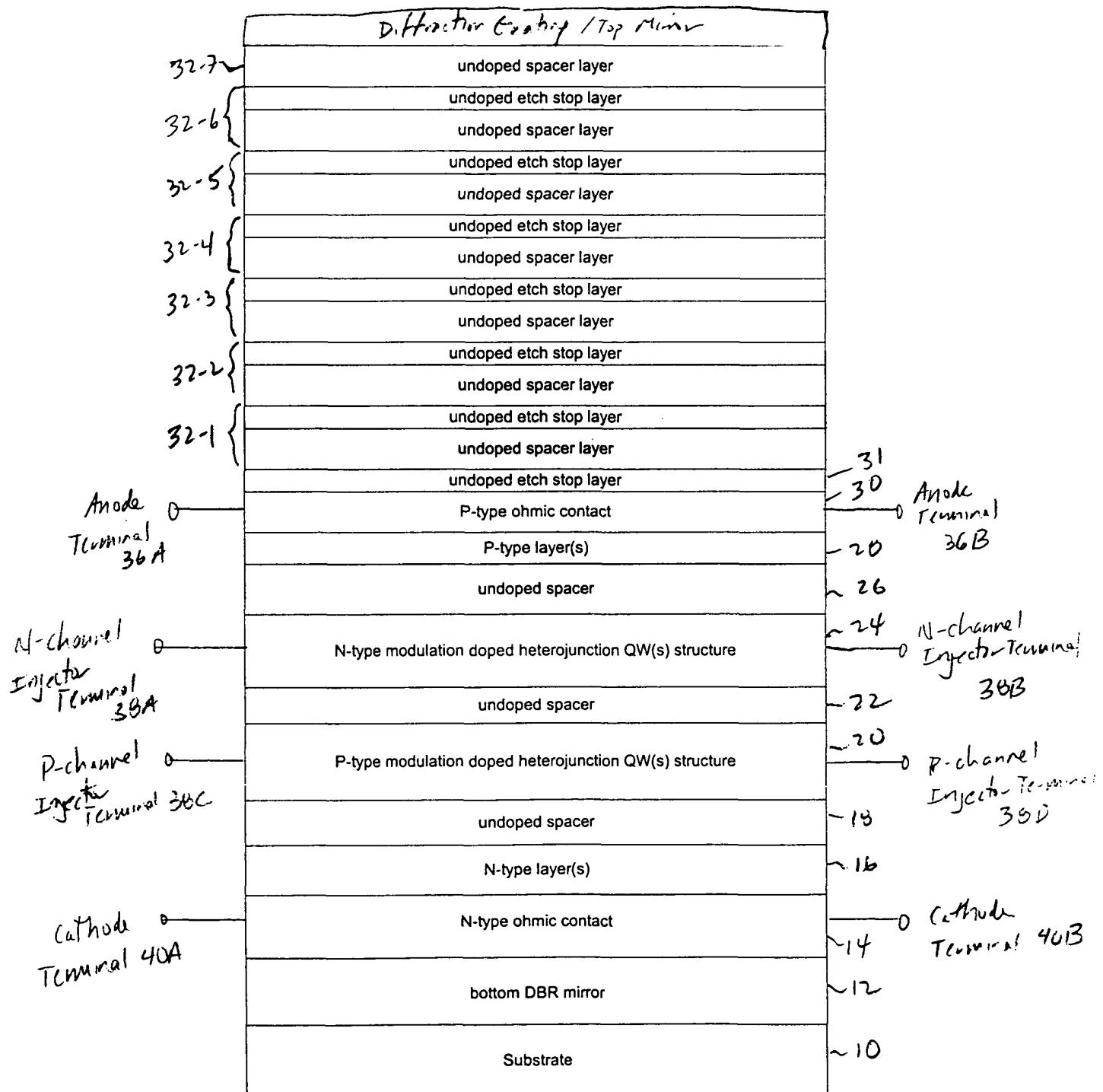


FIG. 2C



	Layer Material	Layer Doping Type	Typical Doping Concentration (atoms/cm ³)	Typical Layer Thickness (Å)	Layer #
32 {	AlAs } GaAs } x 7	und	und		183b
		und	und		183a
31 {	AlAs	und	und	40-100	182
	InGaAs	P+	1E20	25	165b
30 {	GaAs	P+	1E20	75	165a
	Al(0.7)Ga(0.3)As	P	1E17	700	164b
28 {	Al(0.7)Ga(0.3)As	P+	1E19	10	164a
	Al(.15)Ga(.85)As	P+	3.5E18	25	163d
26 {	Al(.15)Ga(.85)As	und	und	200 - 300	163c
	Al(.15)Ga(.85)As	N+	3.5E18	80	163b
24 {	Al(.15)Ga(.85)As	und	und	20-30	163a
	GaAs	und	und	15	162
22 {	In(.20)Ga(.80)AsN } x 3	und	und	60	161
	GaAs } x 3	und	und	100	160b
20 {	GaAs } x 3	und	und	100 - 250	160a
	Al(.15)Ga(.85)As	und	und	5000	159
18 {	GaAs } x 3	und	und	100	158
	In(.20)Ga(.80)AsN } x 3	und	und	60	157
16 {	GaAs } x 3	und	und	15	156
	Al(.15)Ga(.85)As	und	und	30	155d
14 {	Al(.15)Ga(.85)As	P+	3.5E18	80	155c
	Al(.15)Ga(.85)As	und	und	300	155b
12 {	Al(.15)Ga(.85)As	N+	3.5E18	80	155a
	Al(0.7)Ga(0.3)As	N	1E17	700	154
10 {	GaAs } x 3	N+	3.5E18	2200	153
	AlAs } x 7	und	und	1701	151
10 {	GaAs } x 7	und	und	696	152
	AlAs } x 7	und	und	1701	151
10 {	GaAs Substrate		Si		149

FIG. 3

FIG. 4A

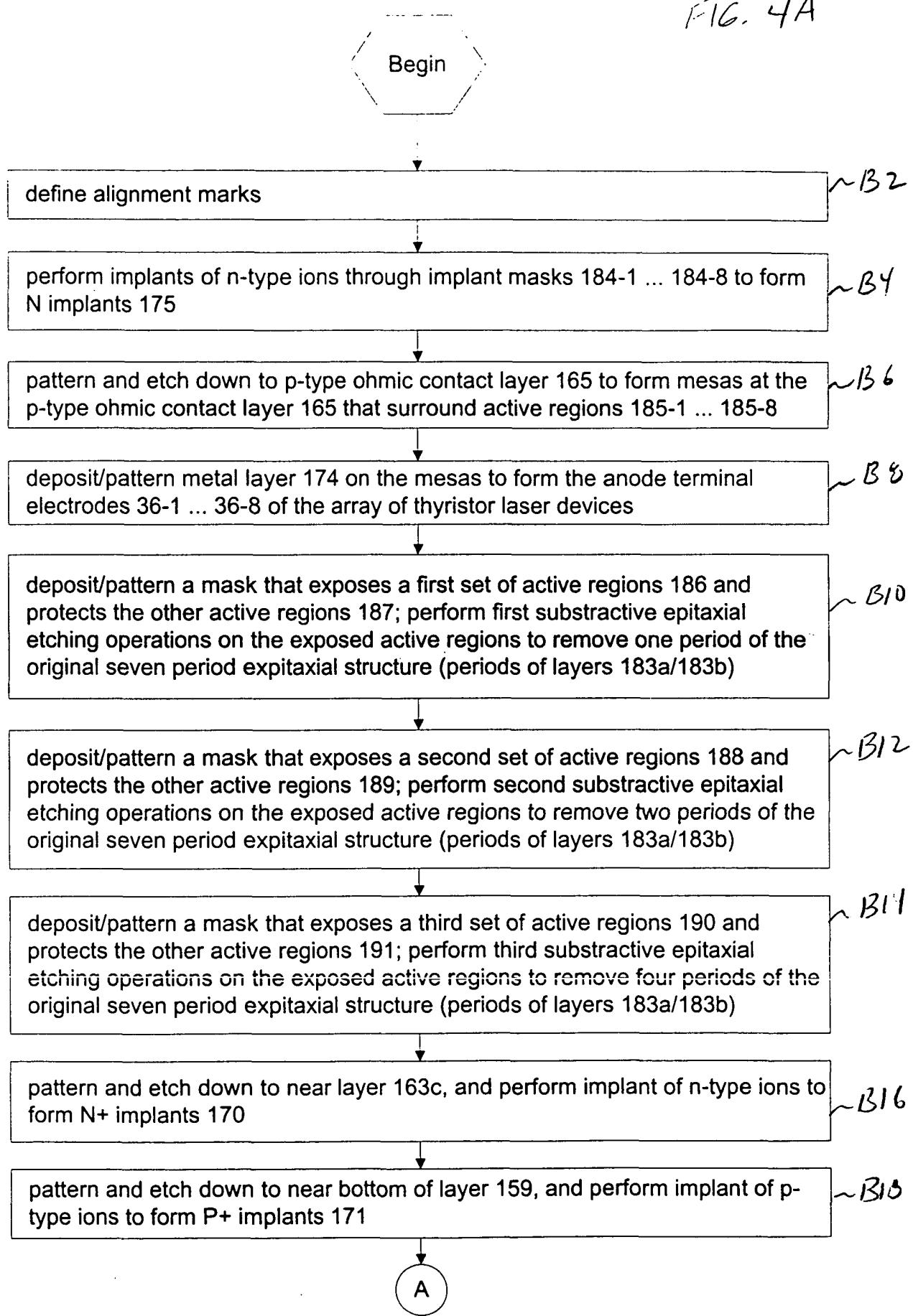
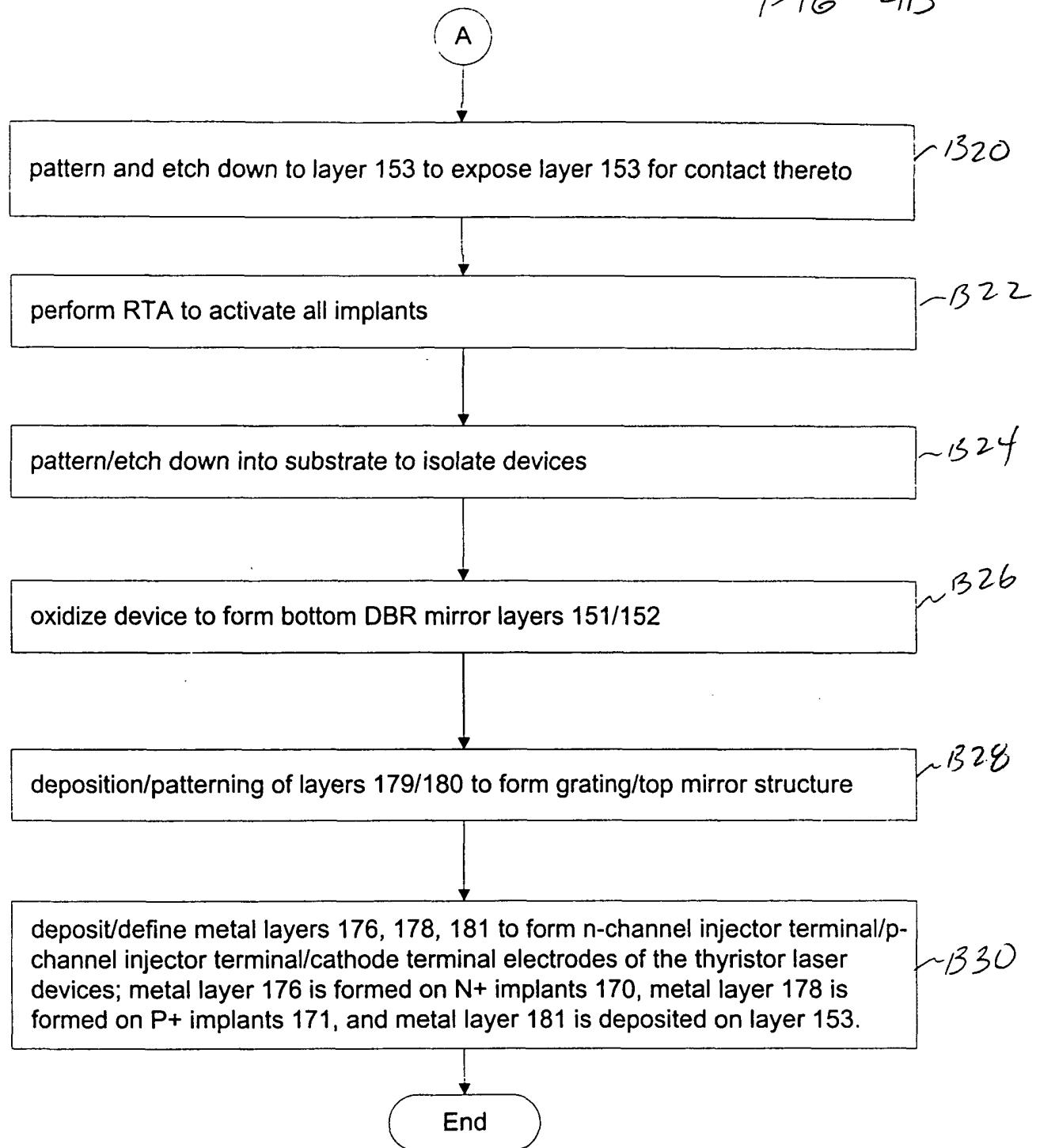
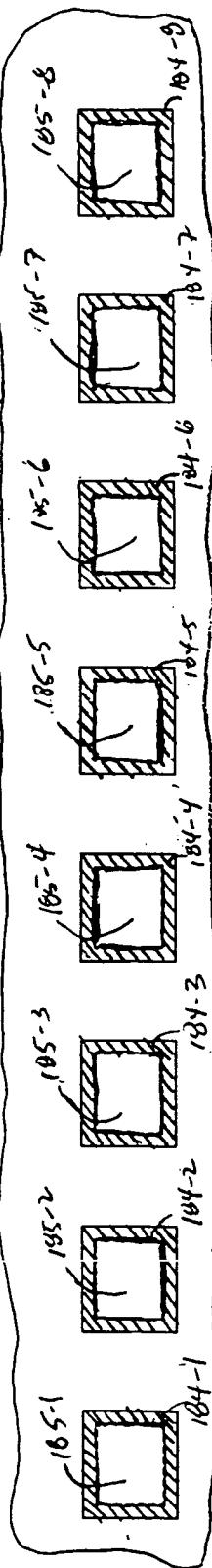
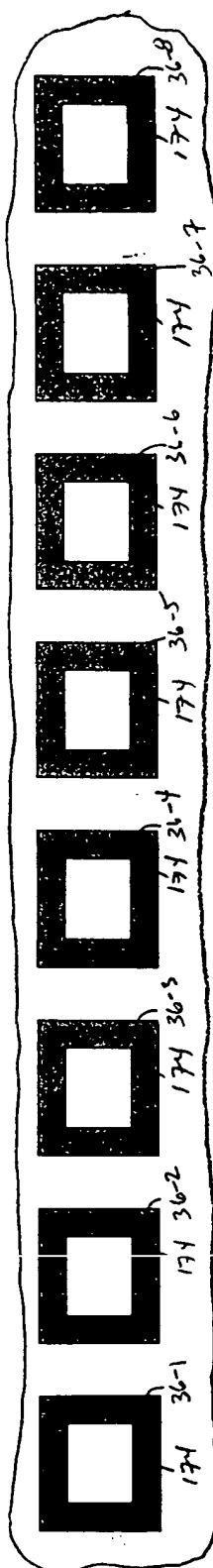


FIG 4B

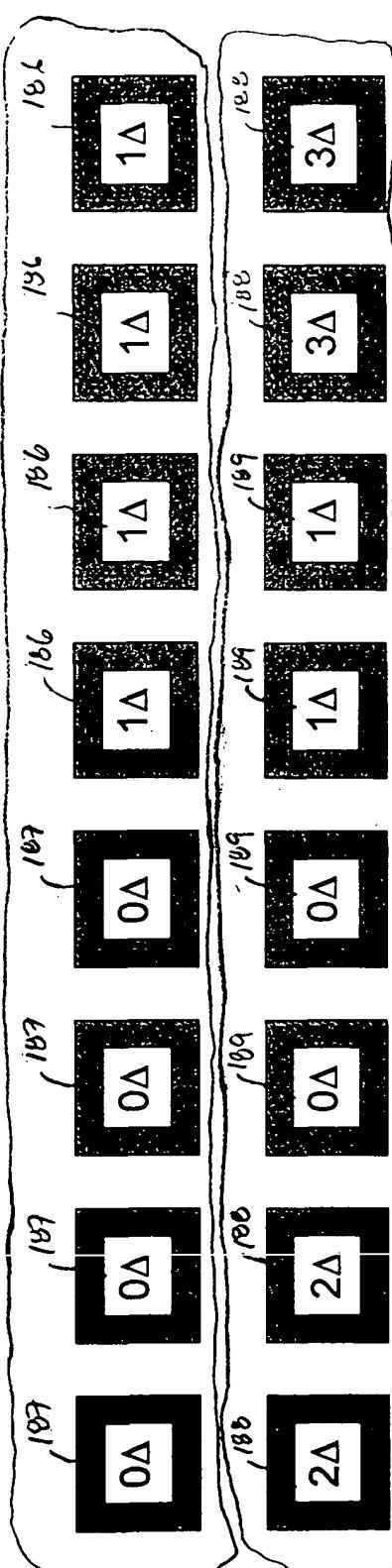




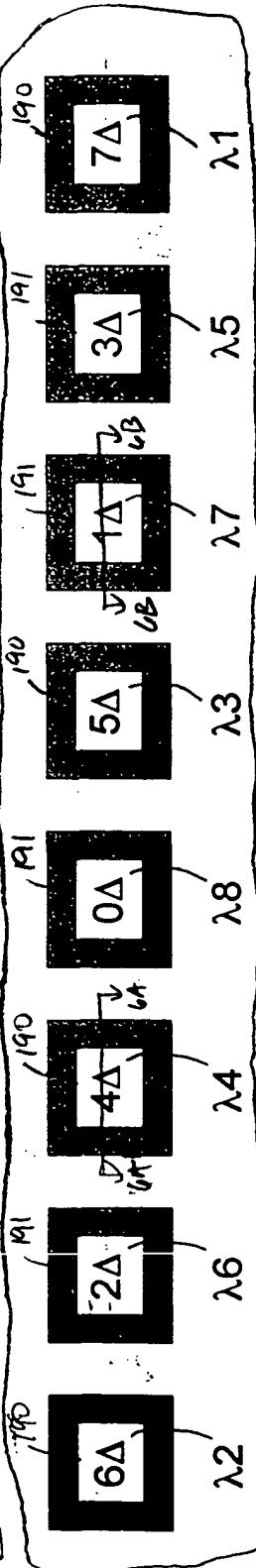
F16a
SA



1-16. GB



6/16 55



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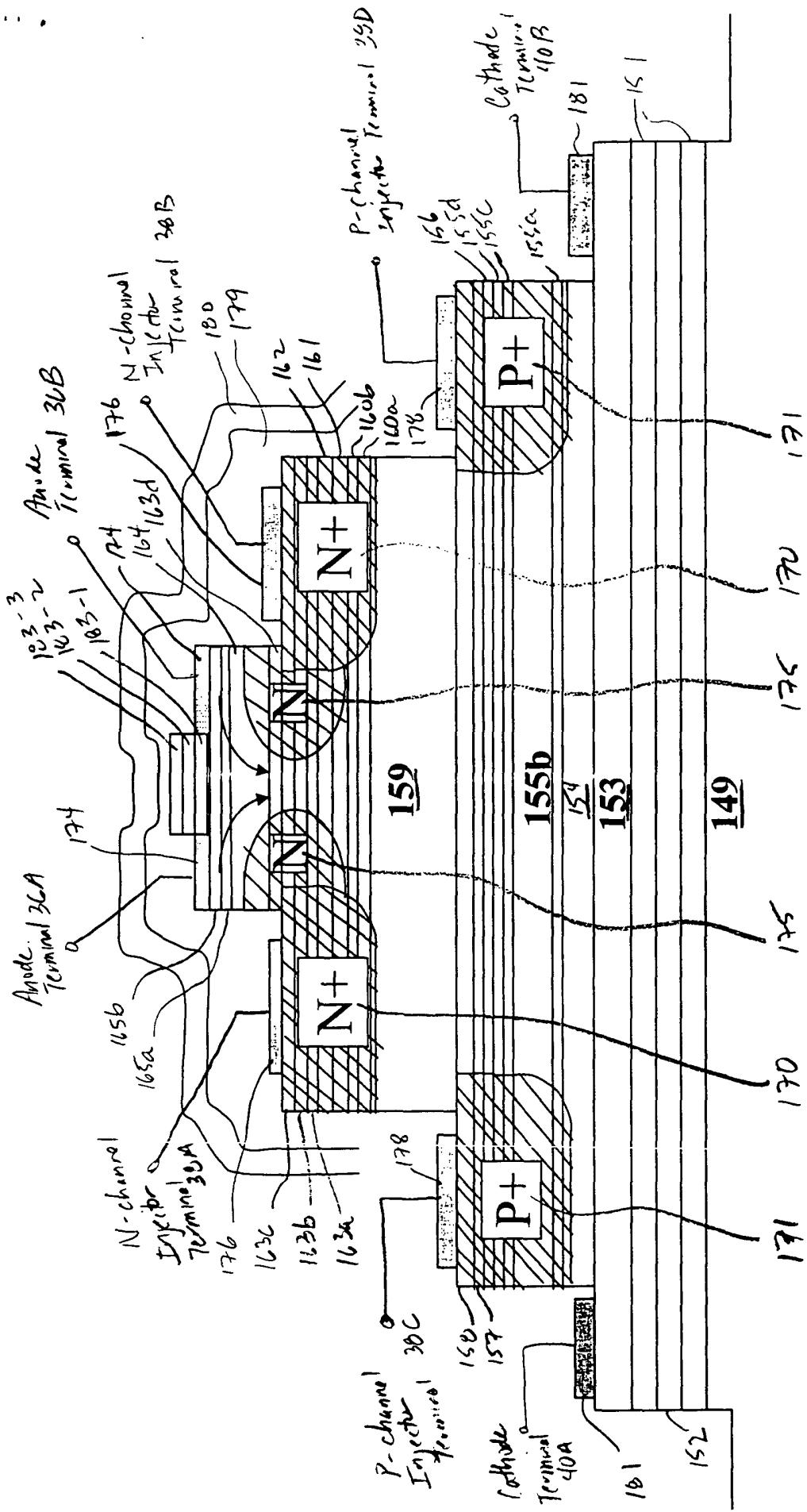


FIG. 6A

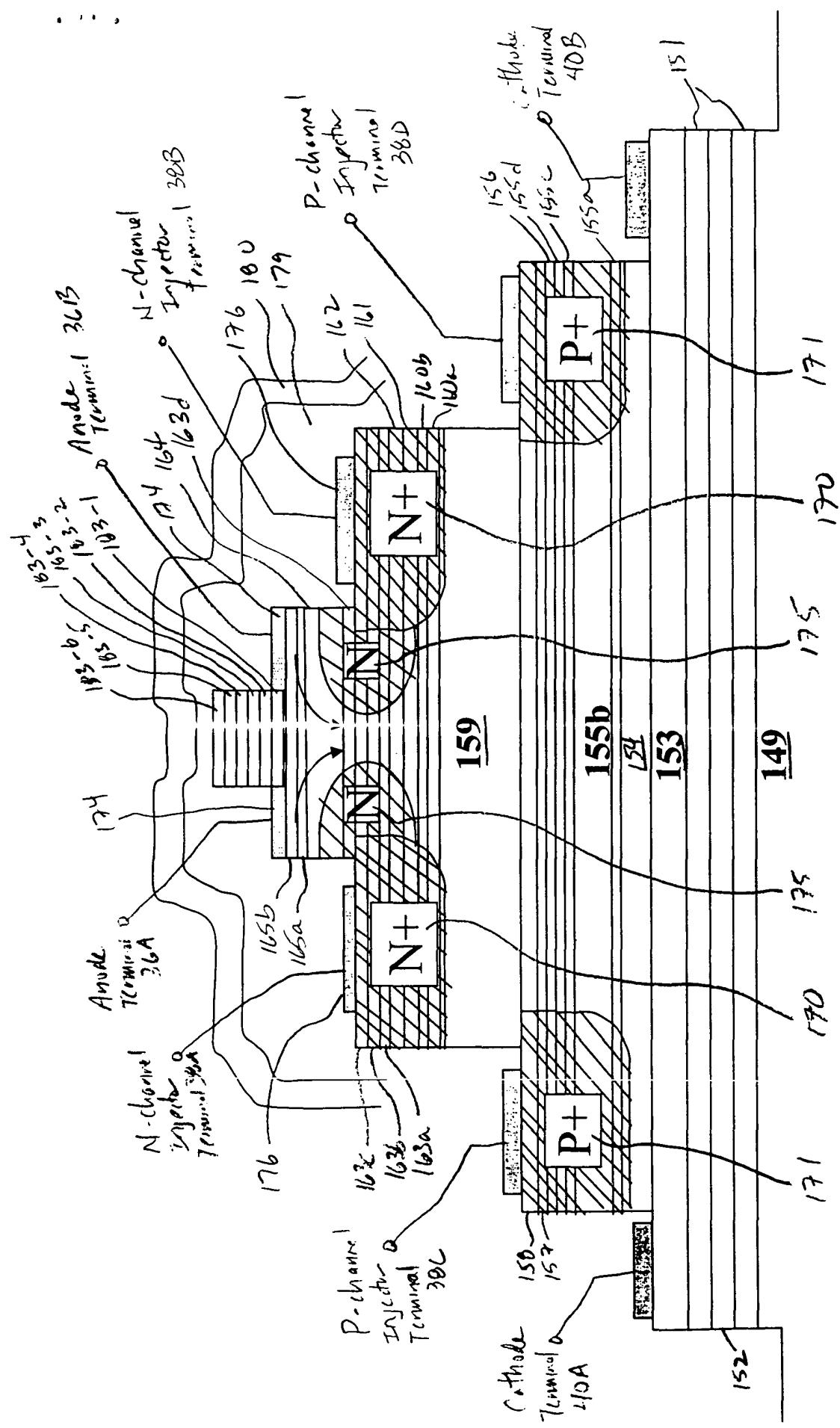


FIG. 6B

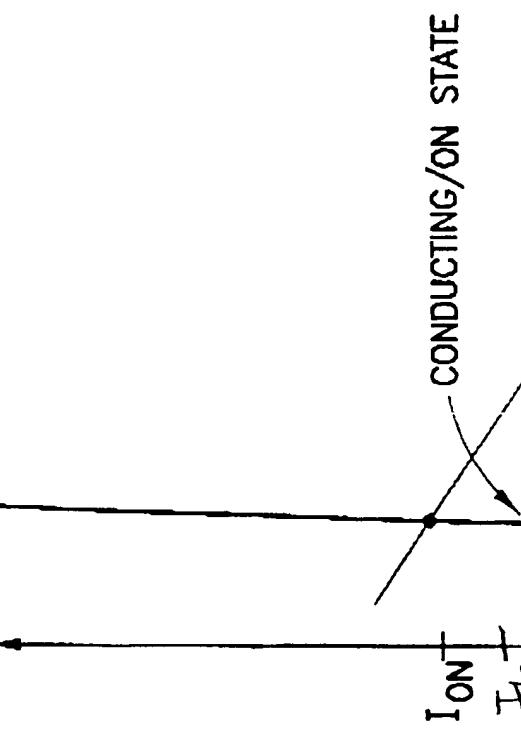


FIG. 7A

CURRENT I

CONDUCTING/ON STATE

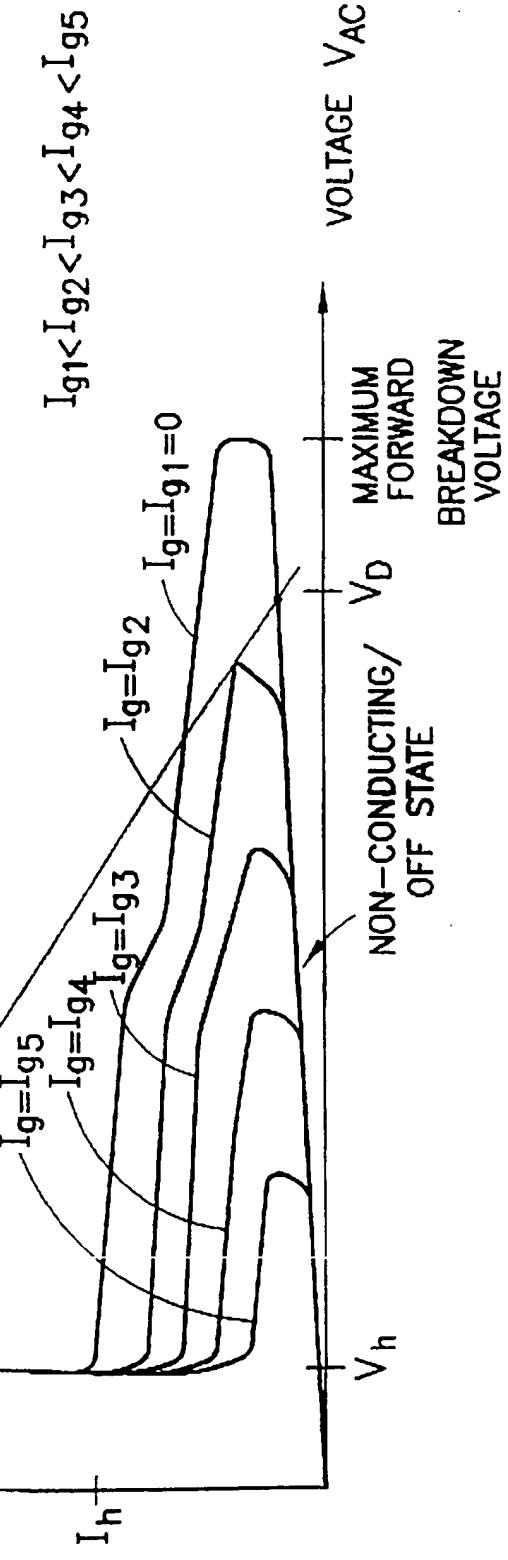


FIG. 7B

$I_{g1} < I_{g2} < I_{g3} < I_{g4} < I_{g5}$

$I_g = I_{g2}$

$I_g = I_{g1} = 0$

VOLTAGE V_{AC}

NON-CONDUCTING/ OFF STATE

V_D

MAXIMUM FORWARD

BREAKDOWN VOLTAGE

V_h